

ABSTRACT

The semiconductor device of the invention achieves a high-speed memory access. When the semiconductor device is configured to include a microprocessor and a semiconductor memory, the microprocessor includes an input/output buffer for system side that is made capable of exchanging signals with the outside by being supplied with a power supply voltage. The semiconductor memory includes an internal power supply circuit that takes in the power supply voltage as a reference voltage, and generates an internal power supply voltage being substantially equal to the power supply voltage; and it also includes an input/output buffer for memory side that is made capable of exchanging signals with the input/output buffer for system side by being supplied with the internal power supply voltage. This circuit configuration saves the level shifting on the microprocessor side, and realizes a high-speed access to the semiconductor memory from the microprocessor.